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REPORT

ON THE

PROPOSED RAIL ROAD

FROM

Columbia to Port Deposit,

BY

JOHN A. SHEAFF,

CIVIL ENGINEER.

WITH AN INTRODUCTION, BY A

COMMITTEE OF THE BOARD OF DIRECTORS

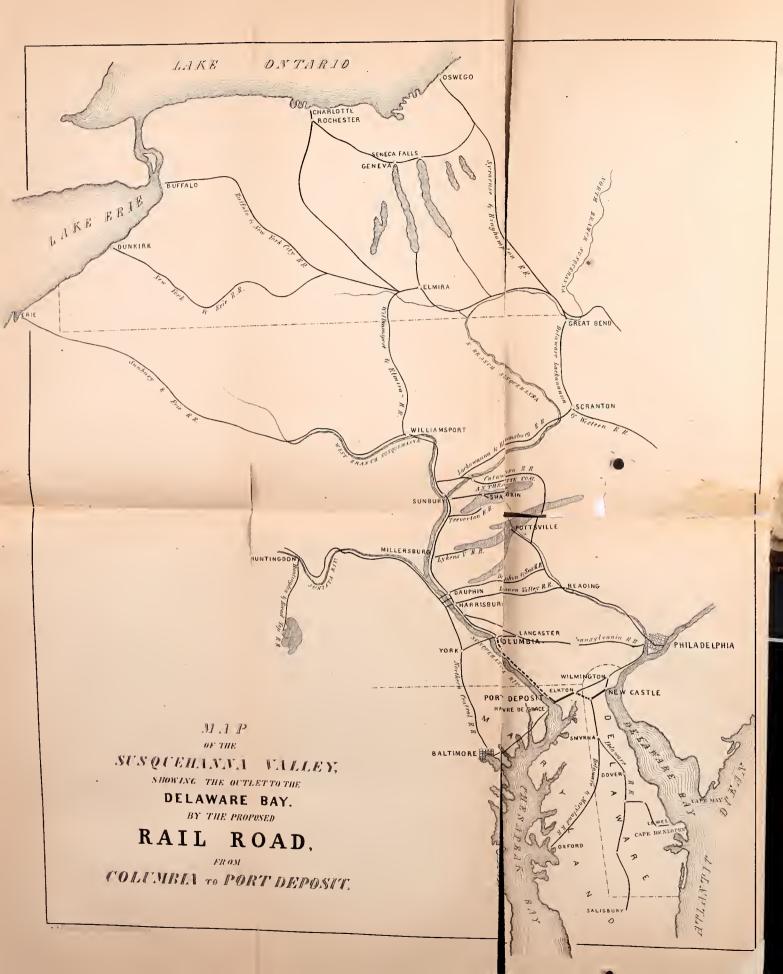
OF THE

COLUMBIA AND MARYLAND LINE RAIL ROAD.

LANCASTER:
PRINTED BY PEARSOL & GEIST.
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OFFICERS

OF THE

COLUMBIA AND MARYLAND LINE RAILROAD,

1860.

President,
JEREMIAH B. HAINES.

Directors,

BARTRAM A. SHAEFFER,
J. J. HECKART,
JOHN C. WALTON,
C. S. KAUFFMAN,
JOSEPH BALLANCE,
JAMES M'SPARREN,
JOHN LONG,
THOS. R. NEEL,
JEREMIAH BROWN, Jr.,
JACOB B. SHUMAN,
W. W. MILLER,
JOHN A. SHEAFF.

Treasurer,

JOSEPH BALLANCE.

Secretary,

JEREMIAH BROWN, Jr.

OFFICERS

OF THE

COLUMBIA AND MARYLAND LINE RAILROAD.

1863.

President:

C. S. KAUFFMAN, COLUMBIA, PA.

Directors:

JEREMIAH B. HAINES, FULTON TWP., LAN. Co., PA.
JACOB TOME, PORT DEPOSIT, MD.
BARTRAM A. SHAEFFER, LANCASTER, PA.
JOSEPH BALLANCE, FULTON TWP., LAN. Co., PA.
JAS. McSPARREN, """

JACOB A. FREY, MANOR TWP., """

JOHN A. SHEAFF, LANCASTER, """

JOHN LONG, DRUMORE TWP., """

SAMUEL J. REEVES, PHILADELPHIA, ""

JEREMIAH BROWN, FULTON TWP., LAN. Co., ""

WYATT W. MILLER, SAFE HARBOR, """

JACOB B. SHUMAN, WASHINGTON BOR., """

Chief Engineer:

JOHN A. SHEAFF.

Treasurer:

JOSEPH BALLANCE.

Secretary:

GEORGE F. BRENEMAN.

Solicitor:

GEN. BARTRAM A. SHAEFFER.



•

Report of Committee on Surveys.

To the Board of Directors of the Columbia and Maryland Line Rail Road.

The undersigned, a Committee on Surveys, having been directed to have the Report of the Engineer printed for the information of the public, together with a brief statement of the history and prospects of the Company, respectfully submit the following:

A statement of the efforts made from time to time, to obtain a railroad communication between Columbia, Lancaster county, and the Delaware Bay, will be found to present another instance of the opposition which a meritorious and demonstrably successful enterprise often encounters from States, corporations or individuals, who, from mistaken views of their own interests, fancy they see a dangerous rival in what really would ultimately prove a useful and profitable auxiliary to their own operations. But the day has gone by when any undertaking whose intrinsic worth is apparent on even a slight examination, can be stifled or suppressed by the honest but mistaken opposition, however powerful, of those who may imagine themselves endangered by its success.

The history of this Company is briefly as follows:

In April, 1837, an act was passed by the Pennsylvania Legislature, incorporating the "Columbia and Maryland Line Railroad Company," but the continuation in Maryland was refused, on the ground that that State was deeply interested in the Tide Water Canal, and would allow no rival.

In June, 1839, a supplement was passed, extending the time for completing the road to April 4, 1852, but this latter period was also suffered to pass by, as the Legislature of Maryland still refused to charter a company to make the road in that State.

In 1851, an application to the Pennsylvania Legislature to revive the charter, met with a strong opposition, the idea being then entertained by some, that the State works and those of other Railroads and Canal Companies, would suffer from a supposed competition for the same trade. The charter was, however, revived, but refused the extension of the road further south than Safe Harbor.

In 1853, another influence obtained a charter for "The Columbia and Octoraro Railroad Company," which authorized the construction of a railroad from Columbia through Washington and Safe Harbor, to intersect the proposed Philadelphia and Baltimore Central Railroad, at some point in Chester county, the intention being to extend the road to New Castle, Delaware.

In the early part of 1856, Thomas Trimble, Esq., then Chief Engineer of the Philadelphia, Wilmington and Baltimore Railroad, was engaged by some gentlemen of Cecil county, Maryland, to survey a route for a railroad from Port Deposit to the Pennsylvania line, along the east bank of the Susquehanna. When the engineer corps had performed that duty, an arrangement was made with them by parties living in Lancaster county, to continue the survey to Safe Harbor. About this time, the friends of the original enterprise had made another application to the Legislature for a revival of their charter, and in order to present all the information possible, John A. Sheaff, Esq., an accomplished and experienced civil engineer, whose former surveys on the eastern side of the Susquehanna for the Susquehanna Canal, had made him perfectly familiar with the ground between Colum-



bia and Safe Harbor, was requested to furnish from his notes an estimate of that portion, and so to complete a report on the whole line from Columbia to Port Deposit.

The rivalry then existing between the friends of this and the Columbia and Octoraro Road, before spoken of, had a material influence on the Legislature, and effected considerable alteration in the charter. The name was changed to the "Washington and Maryland Line Rail Road Company," and the connection at Columbia with the Pennsylvania Railroad, cut off, authority being given to construct a road from Washington Borough only, along the east bank of the Susquehanna to the Maryland line. The act contained a provision, however, allowing the Company to locate and construct the road to Columbia in case the Columbia and Octoraro Railroad Company should not commence the construction of that part of their road lying between Washington and Columbia, within one year from the passage of the act-April 12, 1856.

In the spring of 1857, the Company organized, and in 1858 the Legislature of Maryland incorporated the "Columbia and Port Deposit Railroad Company," authorizing the continuation of this road from the Pennsylvania line to Port Deposit, and its connection with the Port Deposit branch of the Philadelphia, Wilmington and Baltimore Railroad. The act also provides for a consolidation of the two corporations.

At the recent session of the Pennsylvania Legislature, (1860), a supplement to the charter of the Washington and Maryland Line Railroad Company, was passed. This is of a most liberal character—restores the old title, "The Columbia and Maryland Line Railroad"—authorizes a connection at Columbia with the Pennsylvania Railroad—extends the time for commencing the





work five years, and for completing the same, ten years thereafter—provides for an increase of the capital stock, if necessary, and the borrowing of money; and, in short, grants the company all the powers and privileges desired.

The Legislature of Maryland also, at the same time, with great liberality, appropriated the sum of \$60,000 towards the construction of "The Columbia and Port Deposit Railroad," which, as before stated, is but the continuation of this road in Maryland.

Thus, after nearly twenty three years of steady perseverance, the friends of a railroad from Columbia to Port Deposit, have succeeded in obtaining the necessary legislative assistance and sanction to the enterprise. They now come forward and ask the railroad and coal companies, capitalists, farmers, and all others interested, to examine the project and the arguments in its favor, and if convinced of their soundness, to lend their aid.

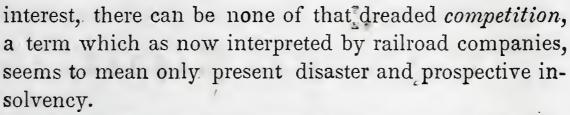
We refer to the able report of the Engineer, Mr. Sheaff, for a more extended statement of the many advantages of the proposed road, and of the trade which must flow through this channel.

Releases of land damages have already been obtained for about twenty-three of the twenty-nine miles between Columbia and the Maryland line. For the remainder of the route no serious difficulty is apprehended, and there is every probability that the question of damages will be settled advantageously to the Company.

The different railroad and canal companies, especially in Pennsylvania, with whose works our proposed road will connect, will here find the only completing link of a chain of improvements in a new direction, which will open to the Susquehanna valley and the teeming country beyond, a market whose importance can hardly be overestimated. And while all will be united by a common







To the great Pennsylvania Railroad, the Northern Central Railroad, the Sunbury and Erie Railroad, and the Philadelphia, Wilmington and Baltimore Railroad, all of which will, with this road and its extension in Maryland, form a grand trunk railroad line, with a descending grade, from the coal and lumber regions of the Susquehanna to the Delaware Bay, the subject is one of deep importance. The subscription of a small per centage on the aggregate capital of those companies would, together with the local subscriptions, justify the immediate commencement of our work.

The State of Delaware and the Eastern shore of Maryland, whose territories, for the greater part, have been so long cut off from railway communication with the great and growing regions abounding in mineral wealth, to the North and West, cannot fail to receive from this enterprise a large accession to their wealth and prosperity.

We invite a careful examination of the subject, and of the facts and arguments presented in the Engineer's report, satisfied that seldom has such an opportunity been offered for a profitable investment.

> BARTRAM A. SHAEFFER, Chairman.

WYATT W. MILLER, JOHN C. WALTON, C. S. KAUFFMAN, JACOB B. SHUMAN.





Engineer's Report.

To the President and Directors of the Columbia and Maryland Line Railroad.

Gentlemen: By a resolution of the Board, I was directed to make a survey and location of your road, from a junction with the Pennsylvania Railroad, south of the Borough of Columbia, to the head of Turkey Hill, report the result to the Board, together with a summary of the survey, made some years ago, from Turkey Hill to the Maryland line, and from thence to Port Deposit, under the direction of Thomas Trimble, Esq., Civil Engineer; and also to give a prospective view of some of the advantages which will arise from its construction. I beg leave, therefore, to submit the following:

I have surveyed two routes from the Pennsylvania Railroad, south of Columbia, to Turkey Hill, with a view to lay before the Board all the information necessary to a full understanding of the subject. I forbear a detail of either, as the accompanying map and profiles, will give a better idea of them than a lengthy description.

The first, which I shall designate as the Upper Line, joins the Pennsylvania Railroad, opposite the Strickler Mansion, and is thirty-four feet higher above the Susquehanna river, than the Lower Line, and consequently demands more expensive grading and bridging, and a maximum grade of fifteen feet per mile. This grade seems heavier than ought to be adopted, on a route along a valley whose declination for the whole distance to Port Deposit, thirty-nine miles, averages only about six feet per mile; but it cannot be avoided, if the Upper Line is

preferred. The distance by the Upper, is nearly four miles and three-eighths, of which two miles and three-eighths are graded fifteen feet per mile, and two miles level. This route is remarkably favorable as regards direction, there being three and three-fourths miles straight, and only five-eighths of a mile curved, the least radius 2000 feet, and it avoids the Columbia and Washington turnpike, and the numerous improvements along it.

The Lower Line connects with an extension of the river shore branch of the Pennsylvania Railroad, about an eighth of a mile nearer Columbia than the Upper, on the land of Ephraim Hershey, Esq., and is traced along the river for nearly the entire distance, occupying, in part, the Columbia and Washington Turnpike, the west side of the main street in the Borough of Washington, and the township road south of that Borough. distance of two miles along the turnpike, the land is divided off into small lots, and is almost a continuous village, although little damage is done to private property except in the Borough of Washington, the lower or southern portion of which is the most densely populated, and where a number of frame buildings will have to be The river shore is so low, in many places, as removed. to be occasionally overflowed by high water; it is therefore requisite to embank at least three feet above the highest water ever known, to secure the road against inundation, and at several points, the embankment will have to be protected, on the side towards the river, by rip rap. line is one-eighth of a mile longer than the Upper Line; is level for one and a half miles, and three miles are graded ten, five, four and three feet per mile; three and five-eighths miles are straight, and seven-eighths of a mile curved, with a minimum radius of 2,000 feet.

Both lines are calculated for the grading of a double



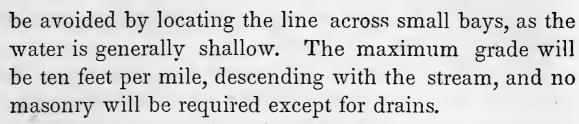


track three-fourths of a mile south of the junction with the Pennsylvania Railroad. The average cost per mile, for grading, masonry, &c., complete, for the Upper Line, is estimated at \$14,800, and for the Lower Line, \$9,000, exclusive of land damages, which, on the latter, will be heavy. The final adoption of one or the other of these routes, will depend upon several contingencies, yet undeveloped, and I am, therefore, not prepared to recommend either.

As it is proposed to make no upward grade in the direction of the stream, and none downward greater than ten feet per mile on the Lower, or fifteen feet on the Upper Line, where a level is impracticable, the road formation must necessarily be more expensive than if the grades were made undulating, by which they could be more readily accommodated to the natural surface of the ground. For though the average fall in the Susquehanna is about six feet in a mile, there are portions where there is more than six feet fall in half a mile. The increased efficiency of the road, will eminently justify the extra cost.

The following is a summary of the Report alluded to in the resolution of the Board:

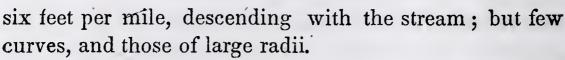
"From Wissler's Run, at the head of Turkey Hill, to the mouth of the Conestoga Creek, a distance of five and five-eighths miles, the river shore is remarkably rough and rocky, with a few intervals of sand flats, one of which is nearly half a mile long, the others short and unimportant. The fall in the river for the above distance is forty-five feet. This portion of the line, for the same extent, will be more expensive than any other, there being no land for cultivation, nor even a path along the river shore, and from the number of indentations and bold points, there will be much curvature, though no curve of a less radius than 1,000 feet. Some of it may



"From the west side of the Conestoga, at Safe Harbor, the line is carried across the Creek, at an elevation of twenty-eight feet above the surface of the water, by a bridge nine hundred feet long, on account of the peculiar formation of the bluffs on each side, and is continued down the river shore to Pequea Creek, which is crossed by a bridge of two hundred feet span, and twenty-eight feet above the level of the water. From thence, down to the Maryland Line along the river, bridging Fishing Creek, fifteen feet above the water with a span of one hundred feet, and Peters' Creek thirteen feet above the water with a span of one hundred and fifty feet. The other creeks of less importance, are Shenk's, Tucquan, McCall's, Muddy, Neel's and Marshall's, which will be crossed by open drains.

"The whole distance from Safe Harbor to the Maryland Line, is eighteen and one-quarter miles, with an average grade of six and a half feet per mile, but for reasons already stated, a grade of ten feet per mile for four miles, has been adopted in the preliminary examination. There is also considerable curvature, owing to irregularities in the hill slopes, though there need be no curve of a less radius than 1,000 feet.

"From the Maryland Line to Port Deposit, the distance is ten miles. The line of the road has been traced along the river shore to the head of the old Maryland Canal, where it crosses the Canal and continues down on the east bank for its entire length. The country, for the greater part, is level, and very favorable to the location of an easy and cheap line. The average grade in



"The only bridges of importance are those across the Octoraro and Conowingo Creeks; the former sixteen feet above the surface of the water, with two spans of one hundred and fifty feet each; and the latter, ten feet above, with one span of one hundred feet.

"The grades being all descending or level from Columbia down, and in the direction of the greatest trade, this Railroad will compare favorably with any other built for a heavy tonnage; and the material for the formation of the roadway, is of a character to make it a most durable work.

"The following is an estimate of the whole line from Columbia to Port Deposit, for the grading and super-structure of a single track, and masonry for a double track and other expenses incident to complete the road (except land damage), ready for the rolling stock, viz:

From Columbia to Safe Harbor, 10 miles at \$21,000 per mile, - - \$210,000.00 Bridge across the Conestoga Creek, - 34,684.00 From Safe Harbor to the Maryland Line, 18\frac{1}{4} miles, at \$19,815 per mile, - - 361,623.75 From the Maryland Line to Port Deposit, 10 miles, at \$18,300 per mile - - 183,000.00 Engineering, - - - - 25,000.00

I beg leave to suggest to the Board, that there ought to be added to the above sum, not less than 15 per cent. on the same, as there is no provision for grading and laying track for sidings, and double track for passing places for trains going in opposite directions, for land damages, water stations, depots, &c.

Amount, - Add 15 per cent.	•	_	-	-	-	-	-	•	\$814,307.75 122,146.00
Total			_		~		_	_	\$936,453.75

The line from Columbia to Port Deposit being only a link in the chain of improvements from the coal mines to New Castle, and as all the others are complete in their equipment, it is difficult to estimate what amount of rolling stock that line would require; but if we set down \$300,000 as the quota for thirty-nine miles, there would, at that rate, be nearly \$1,200,000 for this purpose, on the entire route. The total estimated cost of Road and equipment would be as follows:

Grading and superstructure, complete, - \$936,453.75 Equipment, - - - - 300,000.00

Total cost of Road and equipment, - \$1,236,453.75

Your charter, of course, only extends the road to the Maryland Line. From that point to the junction with the Port Deposit Branch of the Philadelphia, Wilmington and Baltimore Railroad, it is to be made under a charter granted by the State of Maryland. I have, however, deemed it expedient to consider both as a unit, for the purpose of setting forth its claims in a more clear and decided manner. The Board must determine whether the two portions ought to be consolidated under one charter, and take the necessary steps to attain that end, should they think it advisable.

The amount required for grading, &c., of the Columbia and Maryland Line Railroad, according to the above revised estimate, would be as follows:

Grading, superstructure, &c., - - \$717,953.00 Equipment, - - - - - 223,077.00 \$941,030.00 The valley of the Susquehanna, extending from the Chesapeake Bay to the Lakes, is the natural thorough-fare for the trade of a large and fertile portion of the States of Pennsylvania and New York. Rich in mineral resources, among which coal and iron are prominent, with an industrious population engaged in agriculture and manufactures, every resource of art and nature is busily employed in the multiplication of the elements of national wealth, so that it may be said to embrace within its area, as large an amount of the material of commerce as any territory of equal extent within the boundary of our country.

A glance at the accompanying map will show that by making a Railroad from Columbia, in Pennsylvania, to Port Deposit, in Maryland, a Railroad communication will be complete, from the tide water of the Chesapeake Bay to Oswego and Charlotte on Lake Ontario, to Elmira and Dunkirk on the New York and Erie Railroad, and to the harbor of Erie, on Lake Erie, when the Sunbury and Erie Railroad shall be finished. Also, that by the construction of a branch five and a half miles, between the Philadelphia, Wilmington and Baltimore, and the New Castle and Frenchtown Railroads, there will be a continuous line of Railroad between all those points and the Delaware Bay at New Castle, in the State of Delaware.

Experience in the past has, however, demonstrated that trade is not easily diverted from old channels into new ones, for obvious reasons, even where there are advantages in favor of the latter. It has truly been said that, "Trade makes its own connections by the capital, the skill and industry it employs, and no effort to increase its thrift in one locality has destroyed it in any other, where the supposed rival interest has judiciously and in-

dustriously pursued its own aims. The Railroad system has proved the gratifying fact, that the increase of facilities and machinery do but augment and quicken, in proportionate degree, the elements of commerce, and thus furnish new supplies to the prosperity of all, without detriment to any." It is not, therefore, to be expected, that by the construction of your proposed Railroad, the business of any other would be diverted from its accustomed channel, but on the contrary, those immediately connected with it, and leading to the coal and lumber regions, would have a large accession. The concentration of capital, and business relations already established, forbid the idea of a successful rivalry for any portion of that trade. You must look to increased consumption and superior facilities for the transportation of sources of wealth, in the coal, lumber, iron ore, &c., yet in their primeval state, which, it is confidently believed, can only find their way to a profitable market by your Railroad, and which products alone, are sufficient to be highly remunerative for the capital invested.

It is well known to all who are acquainted with the resources of the Susquehanna anthracite coal region, and the history of its trade to the present time, that there does not now exist an avenue to a market, whose consumption is at all equal, or even approximate to the supply it is competent to furnish, and that a connection between the mines in Dauphin and Northumberland counties and the Delaware Bay, which shall at the same time be cheap, speedy and direct, is essential to their prosperity. Vast sums of money have been expended in improving and developing those mines, and in building Canals and Railroads, almost expressly for carrying their products to market, but after long years of expectation and disappointment, they are still in a torpid state,

with millions of tons for sale, and no buyers. The limited demand for coal on the Chesapeake Bay, and its kindred waters, is soon supplied, and the competition is so great, and the profits so small on the amount mined and sold, that unless a better route is opened to them, decades of years may roll around, before they will realize, if they ever can, a profit commensurate to their capital, now lying not only almost idle, but depreciating every year, by the perishable nature of some of their expensive improvements for preparing and shipping coal

During the year 1859, the whole amount of coal mined and sent to market from the Susquehanna region, was as follows:

From	Shamokin, -	-		-		-		-	180,753	tons.
66	Treverton, -		_		-		-		124,223	66
"	Lyken's Valley,			-		-		-	138,713	"

443,689 tons.

And in the same time, there passed over the Reading Railroad and the Schylkill Navigation, 3,004,903 tons! Now, when it is considered that the coal in the Schuylkill region is mined below the water level, at a heavy cost for pumping water, and hoisting it to the surface. while that of the Susquehanna is got above the water level, saving that expense; that the distance from Sunbury to New Castle is one hundred and fifty-five miles, while the average distance from the Schuylkill mines to Richmond is one hundred miles, to which must be added the forty miles from New Castle to Richmond, and forty miles back, making the virtual distance by Railroad and river navigation one hundred and eighty miles, (together with the time of the vessel going to Richmond and back again to New Castle,) it would seem to be no extravagant assertion that coal can be delivered as cheap,



if not cheaper, into the vessel at New Castle, than at Richmond.

But the most important feature of the Railroad between the coal mines of the Susquehanna and New Castle is, that coal can be shipped during several months in the winter season, when all other shipping points are closed, for it is well known that the harbor of New Castle is open in the coldest weather, and is never clogged with floating ice. In addition to this, by the Delaware Railroad now finished, and the Maryland and Delaware Railroad, (through some of the eastern shore counties of Maryland) already commenced, coal can be shipped at any point on the peninsula, by making short lateral Railroads to the Chesapeake Bay on the one side, and the Atlantic Ocean on the other, where there are good harbors, and where depots can be established for ocean steamers. facilities for the coal trade can no where else be had, and no Canal or Railroad now made and in operation can compete with the proposed route, (of which your road is the only important link wanting,) in delivering coal loaded in cars at the mines, and unloaded into the steamship, on the broad waters of the Atlantic.

It is not necessary to attempt to prove the superiority of a Railroad down the eastern side of the Susquehanna, and across to New Castle, to carry coal to the Delaware Bay, over the Susquehanna Canal and the Northern Central Railroad. Time and experience have already settled the question, as far as those works are concerned. The Canal has now been in operation twenty years, and last year, the anthracite coal which passed through it was only about 172,000 tons. Some of it was sent to Delaware City for transhipment, the amount I am unable to state, but the greater portion destined for Baltimore and ports on the Chesapeake and its tributaries. The hazard to







Canal boats crossing the Bay, from Havre de Grace to the Chesapeake and Delaware Canal, and the waste and other expenses incident to transferring coal from cars into boats, from boats to the wharves, and from thence again into vessels, together with the entire interruption of the trade for more than three months in the winter season, when the Canals are closed, must always prevent any large amount being shipped at Delaware City, by this route. Nearly all the coal sent over the Northern Central Railroad, is distributed along the line, or sent on to Baltimore for consumption there. An inconsiderable quantity was shipped during the past season, from thence to ports on the Chesapeake and came into competition with that shipped at Havre de Grace. The City of Baltimore, the terminus of the Northern Central Railroad, from her geographical position, being practically more than three hundred miles west of any point of shipment, at or near the confluence of the Delaware Bay and the Atlantic Ocean, (for all vessels of greater tonnage than the class navigating the Chesapeake and Delaware Canal,) cannot enter into competition with your route in carrying coal destined for the Eastern market, had she the most favorable Railroad connection with the coal mines, which is far from being the case, especially that portion of the Northern Central, from York to Baltimore.

Sufficient time has elapsed since the completion of the several Railroads leading from the Susquehanna to the Schuylkill Valley, to test their efficiency in diverting coal from the former, to be sent to market by the Reading Railroad, but they have failed to afford the cheap facilities which the coal trade demands.

The connexion of the Sunbury and Erie, with the Williamsport and Elmira Railroad, by which the Shamokin Valley coal was expected to be sent to Elmira







and where the demand was supposed to be almost unlimited, has failed to answer the hopes and expectations, of its friends, on account of competition with the cheap bituminous coals of Lycoming, Tioga and Bradford counties, and the anthracite from Luzerne county, ship-

ped by the North Branch Canal to the same point.

The only outlet which can ever give full vitality to the coal trade of the middle coal field, is down the east side of the Susquehanna Valley to the Delaware Bay, and until your proposed road is completed, it must be confined to the limited demand on the Chesapeake or southern market, which has proved itself wholly inadequate to satisfy a reasonable hope for the mines of the Susquehanna, for a generation to come.

It has been thought by some, and used by others, as an argument against constructing your Road, that so many different interests are involved in the transportation of coal upon the several Railroads over which it must pass, down the Valley of the Susquehanna to New Castle, that it would be difficult to reconcile them. is no interest stronger than self interest, either with corporations or individuals, and if this coal trade conflicted with any business, immediate and proper to those Companies, we might defer to such an argument. But every ton of coal, or one thousand feet of lumber passing over your Road, must also pass over theirs, no part of which they now have, or will ever get, until yours is completed; and I think it can be demonstrated, that to refuse to co-operate, or to cast any impediment in the way of securing so important an addition to their trade, would be contrary to the principle, which always obtains in such cases. Taking the line of the Northern Central Railroad at Sunbury, there would be thrown upon that road, the entire tonnage from the Shamokin Valley coal mines, down to







Dauphin, a distance of forty-five miles; on the Dauphin and Susquehanna Railroad, three miles; on the Pennsylvania and Harrisburg Railroads, down to Columbia, thirty-three miles; and on the Philadelphia, Wilmington and Baltimore Railroad, (including the branch of five and a half miles, not yet made, to connect with the New Castle and Frenchtown Railroad,) from Port Deposit to New Castle, thirty-five miles; making the interest of each nearly equal, and giving them a new branch of trade without taking any away from them.

Let us now see, how this anthracite coal trade would affect the Railroads, as at present organized, over which it must be carried. In the recent advertisement, by the Board of Managers of the Philadelphia and Reading Railroad, the average toll for the present season, from Port Carbon to Richmond, is 1.53 cents per ton per mile; we will, however, put it down at 1.5 cts. per ton per mile, for the whole distance from Sunbury to New Castle, and suppose the amount sent from the former point 300,000 tons. The result to each of the Railroads would be

Northern Central Railroad, 45 miles, 67½ cts. per ton, \$202.500 Dauphin & Susqueh'a 3 41 $13\,500$ Penn'a and Harrisburg " 33 491 148,500 Columbia & Pt. Deposit " 39 58± 175.500Phila., Wil. & Balt. 35 157 500

155 m. $$2.32\frac{1}{2}$ per ton, \$697,500

I have taken the Shamokin coal at Sunbury, as coming from the most distant and largest basin, and where the greatest number of collieries have been opened, to illustrate the operation of the trade. At Treverton, at Millersburg and at Dauphin, there are free burning coals of excellent qualities, and well known in the market. From each of these points there will be an amount for transportation, which depends upon the demand, and their ability to furnish. In a short time, most probably,







after the route is open to New Castle, their industry will be taxed to produce the requisite supply. The distances are

From	Sunbury to Ne	w Castle	-	-	155	miles.
	Treverton June			le, -	143	66
"	Millersburg to	New Ca	stle, -	•	129	66
66	Dauphin	66 6	_	~	110	66

The Sunbury and Erie Railroad, now in the course of construction, and which is expected to be finished during the present season, will open an extensive lumber and bituminous coal region, hitherto unavailable, for want of the means of transportation. The lumber which passed through the Susquehanna and Tide Water Canals during the season of 1858, was nearly one hundred and eight millions of feet, and as lumber commands a better price and a larger market on the waters of the Delaware than the Chesapeake Bay, it is fair to presume that, at least, a like amount would be sent down the Susquehanna Valley by Railroad, from that region, without claiming any from other sources. If we set down one hundred millions of feet at 2½ cents per mile, per one thousand feet, and the distance from Williamsport to New Castle, one hundred and ninety-five miles, the amount for each Railroad would stand thus:

Sunbury and Erie Railroad,	40	miles	\$1.00	per M,	\$100,000
Northern Central "	45		$1.12\frac{1}{3}$	"	112.500
Dauphin & Susquehanna"	4	66	$7\frac{\tilde{1}}{2}$	66	7,500
Penn'a & Harrishurg, "	33	66	$82\frac{7}{2}$	66	82,500
Columbia & Pt. Deposit"	39	66	$97\frac{7}{3}$		97,500
Phila. Wil. & Balt. "	45	66	$87\frac{1}{2}$	"	87,500
	195	miles	$$4.88\frac{1}{2}$	per M,	\$487,500

There will be a large amount of bituminous coal from the Juniata and Susquehanna, to ship at New Castle, but disregarding this and other items, and without multiplying instances of profit to the Companies interested







in this route, enough has been shown, above, to prove the absurdity of any opposition from them; on the contrary, you ought, and doubtless will have their hearty co-operation and assistance, in urging on to a speedy

completion, so important an auxiliary.

Although the line of your Railroad is confined to the shore of the Susquehanna, which is barren and rocky for the most part, yet there lies directly east, a large extent of fertile land, which is cleared and highly cultivated to the tops of the hills lining the river. The local trade will, therefore, be important, and at every accessible point, agricultural products will be sent in for transporta-Lime, as one of the cheapest and most valuable of manures, has found its way to the peninsula, between the Chesapeake and Delaware Bays, through the Susquehanna and Tide Water Canals, and some idea of the demand may be had, from the fact, that from three to five hundred thousand bushels pass down annually. stone is abundant from Columbia to Turkey Hill, in the valley of the Conestoga, and at Shenk's Ferry, three miles lower down, and an extensive market for lime and limestone will be opened for the entire length of your Road, from Port Deposit to the termination of the Delaware Railroad, and along the line of the Philadelphia, Wilmington and Baltimore Railroad.

The local demand for coal and iron ores, and the transportation of wrought and cast iron from the extensive works at Columbia, Safe Harber, Colemanville, Rolandsville and Principio, will contribute a large item Through the kindness of W. W. Miller, to the receipts. Esq., the Manager of the Safe Harbor Iron Works, I am enabled to state that, during the past year, the manufactured iron, pig metal, ores, coal, &c., transported to and from the works, amounted to nearly forty-three thousand tons, out of which, twenty-six thousand tons were anthracite and bituminous coal. It would be entirely within the bounds of probability, to put down the amount of coal, for distribution along your line, to be used in manufacturing iron, burning limestone, and for domestic and other uses, at one hundred thousand tons, in a very short time after the road is opened for use.





Soon after the Canal to Havre de Grace was completed—a trade in coal, for plaster and fish from the Bay of Fundy, sprang up, but after a sickly existence died out in a few years. The difficuty of vessels reaching that port, on account of the shoals immediately south, and the distance inland from the capes of Virginia, with the price of coal, augmented by the limited demand, were causes which operated injuriously and effectually against it. I am persuaded that at New Castle, where those objectionable features do not exist, this trade would again revive.

We are all aware how seldom estimates of business for Canals and Railroads have been realized, and I had, therefore, determined not to commit myself to any calculation pointing to a direct revenue, derivable from the operation of your Railroad, but to illustrate how small an amount of business it requires to make the stock a "paying one," and the probabilities in favor of its being an excellent investment for those who expect no other advantage than the profits out of the earnings of the Road, I annex the following:

Taking the figures for coal and lumber, as hereinbefore mentioned, with some prominent local items, leaving out those of minor importance, and *all* return freight, the result is.

300,000 tons Anthracite Coal	at	$58\frac{1}{2}$	cents	175,500
100,000 M. feet of Lumber	66	$97\frac{1}{2}$	66	97,500
15,000 tons of Iron	66	1.00	"	15,000
15,000 " Iron Ore	66	40	66	6,000
500,000 bushels of Lime	66	$1\frac{1}{2}$	"	7,500
20,000 Passengers	66	1.00	66	20,000

\$321,500

Say one-half for repairs, expenses, &c., - 160,750

Nett profit, - - - - \$160,750 The above profit is equal to 13 per cent on the revised estimate of the cost of the Road and equipment, \$1,236,-453. Now, if one-half of the above, for the first two years after it is completed, can be realized, (and that it can, I have not a remote doubt,) the fact would be unprecedented in the history of Railroads in this country,



and there cannot be a question as to the increase of business.

If lime, plaster and other manures be distributed over an area of eight miles wide and thirty-nine miles long, and an easy avenue opened for carrying its products to market, there would be three hundred and twelve square miles, or nearly two hundred thousand acres, enhanced in value of from three to five dollars per acre. This may seem an extravagant estimate to those who have given the matter little or no attention, but these figures are borne out by facts developed in the operation of the Canal on the west side of the river, and I confidently believe, that if the State of Maryland never gets one dollar back, of the million she loaned to the Tide Water Canal Company, she will still be greatly the gainer by the increased value of real estate, and the benefit her citizens have already derived from that work.

I have thus endeavored, as briefly as possible, to to set forth what I consider the prominent advantages of your contemplated improvement. There are other sources of revenue, which will suggest themselves upon a closer examination, and a careful review of the subject will convince every unprejudiced mind that the enterprise you are engaged in commends itself as one having more than ordinary merit. Although the country is suffering under one of those periodical depressions, which inevitably follow an inflated season of prosperity induced by a reckless spirit of speculation, a healthy re-action may soon be looked for, and now, when labor and materials are cheap and abundant, is the time to push forward this work. It requires no fabulous estimates of business or exaggerated statement of profits to recommend itself, and I fully concur with E. Q. Sewall, Jr., Esq., Civil Engineer, in his excellent report on this same subject, a connection of the Susquehanna Valley with New Castle, Delaware, that "you have one of the best unoccupied Railroad routes in the country."

Respectfully, &c.,

J. A. SHEAFF,

LANCASTER, April 30th, 1860.

Civil Engineer.



